



DARK ENERGY
Survey



Fermilab

Dark Energy Survey (DES) DECam Project Working Group Meeting

June 22, 2007

10:00 – 12:00 Noon

Snake Pit

Agenda

- 1) HQ Interactions: Feedback on Discussions with Headquarters [Kathy Turner /Hugh Montgomery/John Peoples/Brenna Flaughter]
 - a) Follow-up from the DOE/NSF CD-1 Review [Kathy Turner / John Peoples]
 - b) Report of the DOE CD-1 Review Committee [John Peoples / Brenna Flaughter]
 - c) JOG Discussions [Kathy Turner / John Peoples]
- 2) Status Update
 - a) DECam Progress Highlights [15 m; Brenna Flaughter]
 - b) Plans and Activities for Supporting a DECam CD-2 Review [time as needed; Wyatt Merritt]
 - c) Status/Plans/Progress Update on DECam CD-2 Documentation, MOUs, [time as needed; Wyatt Merritt]
- 3) CD-2 Requirements [Ed Temple / Dean Hoffer as needed]
- 4) Review Timeline [Dean Hoffer]
- 5) Next Meeting [Dean Hoffer]

DOE O 413.3

Critical Decision Table

DOE O 413.3A (Updated 10/30/06)

Preconceptual Planning	Conceptual Design	Preliminary Design	Final Design	Construction	Operations
❖	❖	❖	❖	❖	❖
CD-0 Approve Mission Need	CD-1 Approve Alternative Selection & Cost Range	CD-2 Approve Performance Baseline	CD-3 Approve Start of Construction	CD-4 Approve Start of Operations or Project Completion	
Actions Authorized by Critical Decision (CD) Approval					
CD-0	CD-1	CD-2	CD-3	CD-4	
<ul style="list-style-type: none"> Proceed with Conceptual Design Request PED funding Start monthly PARS & Quarterly Project Performance reporting 	<ul style="list-style-type: none"> Allow Expenditure of PED Funds for preliminary design Approval of long-lead procurement if necessary 	<ul style="list-style-type: none"> Establish Performance Baseline Continue design Request construction funding 	<ul style="list-style-type: none"> Approve expenditure of funds for construction 	<ul style="list-style-type: none"> Allow start of operations or project completion 	
Non-Nuclear Facilities--Prerequisite Activities for CDs					
<ul style="list-style-type: none"> Review of Mission Need Statement (MSN) by Office of Program Analysis & Evaluation (CF-20) for \$100M or greater. Perform Mission Need Independent Project Review (IPR) for Major System (MS) projects (>=\$750K) Perform Pre-conceptual Planning Evaluate Information Technology (IT) projects with Departmental Enterprise Architecture framework 	<ul style="list-style-type: none"> Review of Acquisition Strategy (AS) (OECM review for MS project) Review of Conceptual Design <ul style="list-style-type: none"> Requirements Analysis Risk Analysis Alternative Analysis Value Management determination Assess Requirements Analysis, Risk Analysis, Alternative Analysis, & Value Management. Appoint FPD Establish & charter Integrated Project Team Ensure compliance with One-for-One Replacement requirement for building square footage Ensure Integrated Safety Management Implementation Ensure consideration for High Performance Sustainable Building Assess if QA Program is acceptable 	<ul style="list-style-type: none"> Perform Baseline External Independent Review (EIR) & validation by OECM for \$100M or greater. Perform Independent Cost Review or Independent Cost Estimates for MS project as part of EIR. Program IPR for \$20M to less than \$100M Review of Preliminary Design Establish compliant project EVMS for \$20M or more, & OECM certifiable EVMS for project TPC with \$50M or more Conduct Value Engineering (as applicable) Incorporate High Performance Sustainable Building provisions into design Determine if QA Program is acceptable 	<ul style="list-style-type: none"> Perform Executability EIR by OECM for MS projects Perform IPR for Non-MS projects by Program (SC) 	<ul style="list-style-type: none"> Verify Key Performance Parameter or Completion Criteria achieved Perform Readiness Assessment or Operational Readiness Review Revise environmental management system. 	<p>Post CD-4 Closeout</p> <ul style="list-style-type: none"> Perform Final Administrative & Financial Closeout Conduct Post Implementation Review for IT projects
Hazard Category 1, 2, and 3 Nuclear Facilities--Additional Prerequisite Activities/Documents for CDs					
	<ul style="list-style-type: none"> Perform Technical IPR Prepare Conceptual Safety Design Report (SDR) Prepare a Preliminary Safety Validation Report (PSVR) 	<ul style="list-style-type: none"> Prepare Preliminary SDR Prepare a PSVR based on updated design 	<ul style="list-style-type: none"> Prepare Prelim Documented Safety Analysis Report (SAR) Prepare SER 	<ul style="list-style-type: none"> Prepare Documented SAR with Technical Safety Requirements Prepare SER 	
Prerequisite Documents					
<ul style="list-style-type: none"> MSNS Tailoring Strategy 	<ul style="list-style-type: none"> Acquisition Strategy Conceptual Design Report Risk Management Plan Risk Assessment Preliminary PEP Preliminary Hazard Analysis (HA) Preliminary Security Vulnerability Assessment Report (SVAR) Initial Cyber Security Plan for IT projects 	<ul style="list-style-type: none"> Performance Baseline Preliminary Design Updated Risk Assessment Updated PEP Updated HA (Approved at Field Level) Updated Preliminary SVAR NEPA Documentation Updated Initial Cyber Security Plan for IT projects 	<ul style="list-style-type: none"> Final Design Updated CD-2 documents Updated QA Program An Approved Construction Project Safety & Health Plan Updated Cyber Security Plan for IT projects 	<ul style="list-style-type: none"> Checkout, Testing & Commissioning Plan Project Transition/Closeout Plan Finalized QA Plan, SVAR, HA Report, Construction Project Safety & Health Plan, Finalized Cyber Security Plan for IT projects & completed Certification & Accreditation, as required 	<p>Post CD-4 Closeout</p> <ul style="list-style-type: none"> Final Project Closeout Report Lessons Learned Report Required Operational Documentation
<ul style="list-style-type: none"> AS-Acquisition Strategy EIR-External Independent Review EVMS-Earned Value Mgmt. System HA-Hazard Analysis IPR-Internal Project Review 	<ul style="list-style-type: none"> MSN-Mission Need Statement MS-Major Systems OECM-Office of Engr. & Const. Mgmt. QA-Quality Assurance PSVR-Prelim. Safety Validation Report 	<ul style="list-style-type: none"> SAR-Safety Analysis Report SDR-Safety Design Report SER-Safety Evaluation Report SVAR-Security Vulnerability Assess. Report TPC-Total Project Cost 			
Budget Related Documents					
<ul style="list-style-type: none"> After CD-0 approval, Exhibit 300 for Projects >\$20M: Annual submission initiated during the federal budget cycle when funds are requested. Project Data Sheets: Annual submission initiated during the federal budget cycle when TEC funds are requested. 					

CD-2 and CD-3 Review Criteria

(Excerpt from DOE M 413.3-1 (3-28-03))

Performance Baseline Review (CD-2)	Construction or Execution Readiness Review (CD-3)
<p>Key review elements for a Performance Baseline Review are:</p> <ul style="list-style-type: none"> - System Functions and Requirements - Preliminary Design and Design Review - Work Breakdown Structure - Resource Loaded Schedule - Total Project Cost and Project Schedule - Risk Management - Project Execution Plan - Acquisition Strategy - Integrated Project Team - Hazards Analysis - Value Management/Engineering - Project Controls/Earned Value Management System 	<p>Key review elements for a Construction or Execution Readiness Review are:</p> <ul style="list-style-type: none"> - Final Design Functions and Requirements/Site Final Design Review - Final Drawings and Specifications - Construction/Execution Planning - Resource Loaded Schedule - Risk Management - Project Execution Plan - Acquisition Strategy - Integrated Project Team - Value Management/Engineering - Project Controls/Earned Value Management System
<p>The following documents are to available and assessed:</p> <ul style="list-style-type: none"> - System Functions and Requirements Document (also referred to as the “Design-to” requirements or Design Criteria) - Results of and Responses to Site Preliminary Design Review - Detailed Resource Loaded Schedule - Detailed Cost Estimate - Risk Management Assessment - Project Execution Plan - Acquisition Strategy - Hazards Analysis - <i>Preliminary Safety Analysis Document</i> 	<p>The following documents are to available and assessed:</p> <ul style="list-style-type: none"> - System Functions and Requirements Document - Final Design Drawings and Specifications - Results of and Responses to Site Final Design Review - Construction Planning Document - Detailed Resource Loaded Schedule - Detailed Cost Estimate - Risk Management Assessment - Project Execution Plan - Acquisition Strategy - Safety Documentation

DOE O 413.3A CD-2 Prerequisites Met

- ✓ Performance Baseline
- ✓ Project Execution Plan
- ✓ Earned Value Management System
- ✓ Performance Baseline Validation
- ✓ External Independent Review
- ✓ Independent Cost Estimate
- ✓ Quality Assurance Program
- ✓ Preliminary Design
- ✓ Project Data Sheet
- ✓ Design Review
- ✓ Preliminary Safety Design Report
- ✓ Hazard Analysis Report
- ✓ Preliminary Security Vulnerability Assessment Report
- ✓ Preliminary Safety Evaluation Report
- ✓ Sustainability Report (LEED Certification)
- ✓ National Environmental Policy Act Documentation – FONSI approved 1/29/07

➤ CD2 ESAAB folder on the SharePoint Site

<https://spteam1.pnl.gov/sites/crl/Web/ESAAB.aspx>



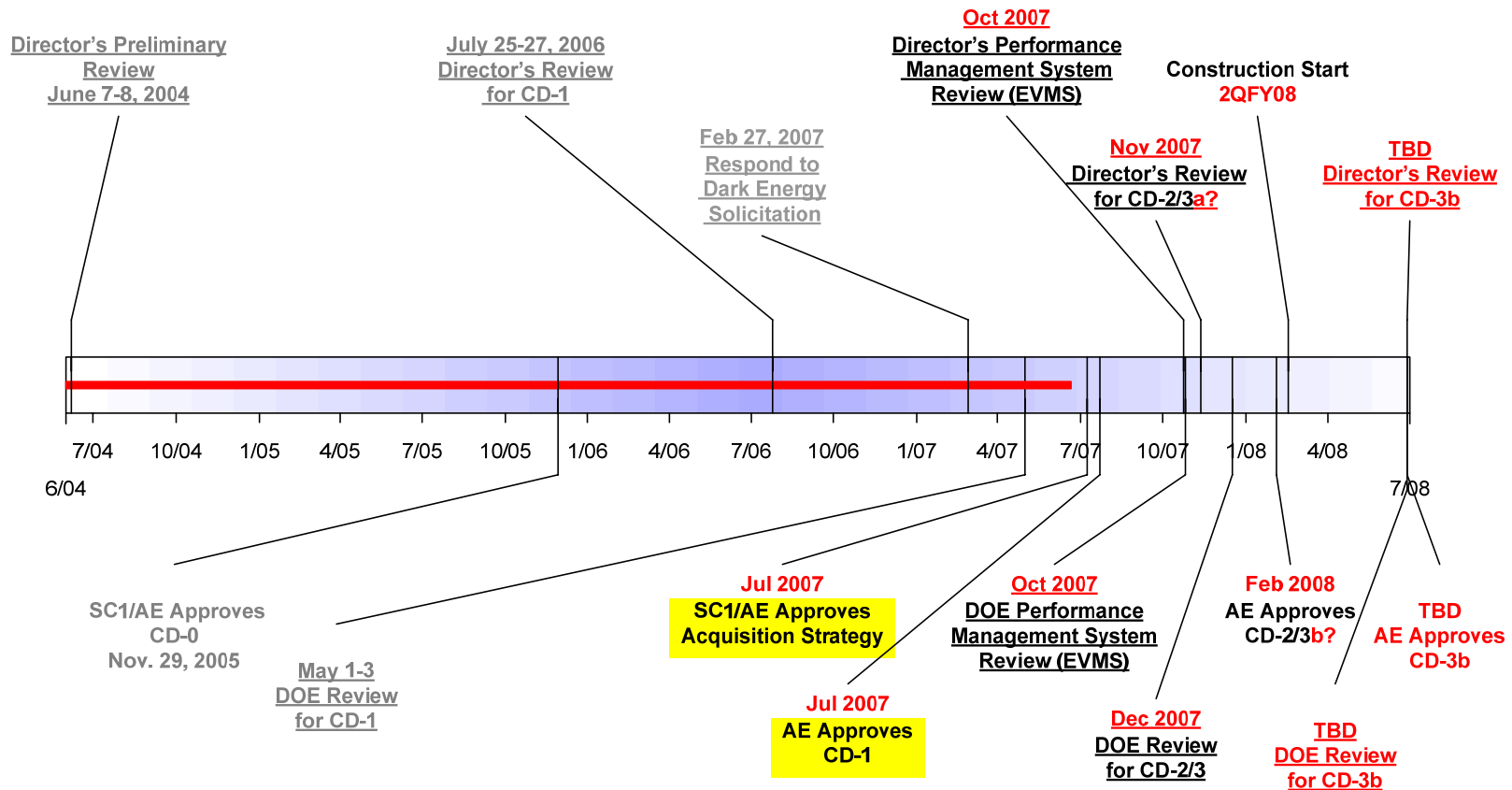
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Dark Energy Survey - DECam Project Draft Timeline for Critical Decisions & Reviews

Updated 21-Jun-07



Note:
Items marked in Red indicates change from prior version